

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2004/016600

<p>A. CLASSIFICATION OF SUBJECT MATTER Int.C1⁷ C12N15/00, C12M1/00, C12Q1/68, G01N27/447</p> <p>According to International Patent Classification (IPC) or to both national classification and IPC</p>														
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) Int.C1⁷ C12N15/00, C12M1/00, C12Q1/68, G01N27/447</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) MEDLINE, BIOSIS/WPI (DIALOG)</p>														
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>X Y</td> <td>JP 2000-146911 A (Ortho-Clinical Diagnostics, Inc.), 26 May, 2000 (26.05.00), Full text & EP 979868 A2 & CA 2279131 A1 & US 2001/0049437 A1</td> <td>1 2-5</td> </tr> <tr> <td>X Y</td> <td>JP 5-099899 A (Hitachi, Ltd.), 23 April, 1993 (23.04.93), Full text (Family: none)</td> <td>1 2-5</td> </tr> <tr> <td>Y</td> <td>Edited by the Japanese Biochemical Society, Tanpakushitsu I - Bunri Seito Seishitsu -, first edition, Tokyo Kagaku Dojin, 26 February, 1990 (26.02.90), pages 53 to 66</td> <td>1-5</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X Y	JP 2000-146911 A (Ortho-Clinical Diagnostics, Inc.), 26 May, 2000 (26.05.00), Full text & EP 979868 A2 & CA 2279131 A1 & US 2001/0049437 A1	1 2-5	X Y	JP 5-099899 A (Hitachi, Ltd.), 23 April, 1993 (23.04.93), Full text (Family: none)	1 2-5	Y	Edited by the Japanese Biochemical Society, Tanpakushitsu I - Bunri Seito Seishitsu -, first edition, Tokyo Kagaku Dojin, 26 February, 1990 (26.02.90), pages 53 to 66	1-5
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<p><input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.</p>														
<p>* Special categories of cited documents:</p> <table border="0"> <tr> <td style="vertical-align: top;"> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </td> <td style="vertical-align: top;"> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p> </td> </tr> </table>			<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p>										
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<p>Date of the actual completion of the international search 01 February, 2005 (01.02.05)</p>		<p>Date of mailing of the international search report 22 February, 2005 (22.02.05)</p>												
<p>Name and mailing address of the ISA/ Japanese Patent Office</p>		<p>Authorized officer</p>												
<p>Facsimile No.</p>		<p>Telephone No.</p>												

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 2003-500645 A (BILATEC AG), 07 January, 2003 (07.01.03), Full text & WO 2000/71999 A1 & EP 1180238 A1	6
X	JP 7-203956 A (Canon Inc.), 08 August, 1995 (08.08.95), Full text (Family: none)	6

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

The inventions of claims 1-5 (invention group A) relate to a method of concentrating and purifying a nucleic acid by electrophoresis characterized in that the level of charging is regulated.

The invention of claim 6 is directed to an apparatus for nucleic acid concentration and purification wherein electrophoresis with the constitution recited in the claim is carried out.

The matter common to the invention group A and the invention of claim 6 is an invention relating to a method of concentrating and purifying a nucleic acid by electrophoresis.

(continued to extra sheet)

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

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Continuation of Box No.III of continuation of first sheet(2)

However, this common matter is not special technical feature within the meaning of PCT Rule 13.2, second sentence, because it was publicly known before the priority date of this application as described in JP 2000-146911 A, etc.

Therefore, this international application does not satisfy the requirement of unity of invention.

It appears that the number of inventions of this international application is 2.

A. 発明の属する分野の分類 (国際特許分類 (IPC))		
Int. Cl ⁷ C12N15/00, C12M1/00, C12Q1/68, G01N27/447		
B. 調査を行った分野		
調査を行った最小限資料 (国際特許分類 (IPC))		
Int. Cl ⁷ C12N15/00, C12M1/00, C12Q1/68, G01N27/447		
最小限資料以外の資料で調査を行った分野に含まれるもの		
国際調査で使用した電子データベース (データベースの名称、調査に使用した用語)		
MEDLINE, BIOSIS/WPI(DIALOG)		
C. 関連すると認められる文献		
引用文献の カテゴリー*	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号
<u>X</u> Y	JP 2000-146911 A (オルソークリニカル ダイアグノスティクス, インコーポレイティド) 2000.05.26, 全文 & EP 979868 A2 & CA 2279131 A1 & US 2001/0049437 A1	<u>1</u> 2-5
<u>X</u> Y	JP 5-099899 A (株式会社日立製作所) 1993.04.23, 全文 (ファミリーなし)	<u>1</u> 2-5
Y	社団法人 日本生化学会編, タンパク質 I ー分離・精製・性質ー, 第1版, 株式会社 東京化学同人, 1990.02.26, p.53-66	1-5
<input checked="" type="checkbox"/> C欄の続きにも文献が列挙されている。 <input type="checkbox"/> パテントファミリーに関する別紙を参照。		
* 引用文献のカテゴリー 「A」 特に関連のある文献ではなく、一般的技術水準を示すもの 「E」 国際出願日前の出願または特許であるが、国際出願日以後に公表されたもの 「L」 優先権主張に疑義を提起する文献又は他の文献の発行日若しくは他の特別な理由を確立するために引用する文献 (理由を付す) 「O」 口頭による開示、使用、展示等に言及する文献 「P」 国際出願日前で、かつ優先権の主張の基礎となる出願日の後に公表された文献 「T」 国際出願日又は優先日後に公表された文献であって出願と矛盾するものではなく、発明の原理又は理論の理解のために引用するもの 「X」 特に関連のある文献であって、当該文献のみで発明の新規性又は進歩性がないと考えられるもの 「Y」 特に関連のある文献であって、当該文献と他の1以上の文献との、当業者にとって自明である組合せによって進歩性がないと考えられるもの 「&」 同一パテントファミリー文献		
国際調査を完了した日 01.02.2005	国際調査報告の発送日 22.2.2005	
国際調査機関の名称及びあて先 日本国特許庁 (ISA/J P) 郵便番号 100-8915 東京都千代田区霞が関三丁目4番3号	特許庁審査官 (権限のある職員) 高堀 栄二	4 B 3 2 2 7
電話番号 03-3581-1101 内線 3488		

C (続き) . 関連すると認められる文献		
引用文献の カテゴリー*	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号
X	JP 2003-500645 A (ビラテック アクチエンゲゼルシャフト) 2003.01.07, 全文 & WO 2000/71999 A1 & EP 1180238 A1	6
X	JP 7-203956 A (キヤノン株式会社) 1995.08.08, 全文 (ファミリーなし)	6

第Ⅱ欄 請求の範囲の一部の調査ができないときの意見 (第1ページの2の続き)

法第8条第3項 (PCT 17条(2)(a)) の規定により、この国際調査報告は次の理由により請求の範囲の一部について作成しなかった。

1. ☐ 請求の範囲 _____ は、この国際調査機関が調査をすることを要しない対象に係るものである。つまり、
2. ☐ 請求の範囲 _____ は、有意義な国際調査をすることができる程度まで所定の要件を満たしていない国際出願の部分に係るものである。つまり、
3. ☐ 請求の範囲 _____ は、従属請求の範囲であってPCT規則6.4(a)の第2文及び第3文の規定に従って記載されていない。

第Ⅲ欄 発明の単一性が欠如しているときの意見 (第1ページの3の続き)

次に述べるようにこの国際出願に二以上の発明があるところの国際調査機関は認めた。

・請求の範囲1-5に係る発明(発明群A)は、荷電量の調節を行うことを特徴とする電気泳動を用いた核酸の濃縮精製方法に関する発明である。

・請求の範囲6に係る発明は、同項に記載された構成を有する電気泳動を行う核酸の濃縮精製装置である。

発明群Aと請求の範囲6に係る発明に共通の事項は、電気泳動を用いた核酸の濃縮精製方法に関する発明であることである。

しかしながら、JP 2000-146911 Aなどに記載されているように、当該事項は本願優先日前に公知であったので、PCT規則13.2の第2文の意味において、この共通事項は特別な技術的特徴ではない。

よって、本国際出願は発明の単一性の要件を満たしていない。

なお、本国際出願の発明の数は2であると認められる。

1. ☒ 出願人が必要な追加調査手数料をすべて期間内に納付したので、この国際調査報告は、すべての調査可能な請求の範囲について作成した。
2. ☐ 追加調査手数料を要求するまでもなく、すべての調査可能な請求の範囲について調査することができたので、追加調査手数料の納付を求めなかった。
3. ☐ 出願人が必要な追加調査手数料を一部のみしか期間内に納付しなかったため、この国際調査報告は、手数料の納付のあった次の請求の範囲のみについて作成した。
4. ☐ 出願人が必要な追加調査手数料を期間内に納付しなかったため、この国際調査報告は、請求の範囲の最初に記載されている発明に係る次の請求の範囲について作成した。

追加調査手数料の異議の申立てに関する注意

- ☐ 追加調査手数料の納付と共に出願人から異議申立てがあった。
- ☒ 追加調査手数料の納付と共に出願人から異議申立てがなかった。

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